Figure 1

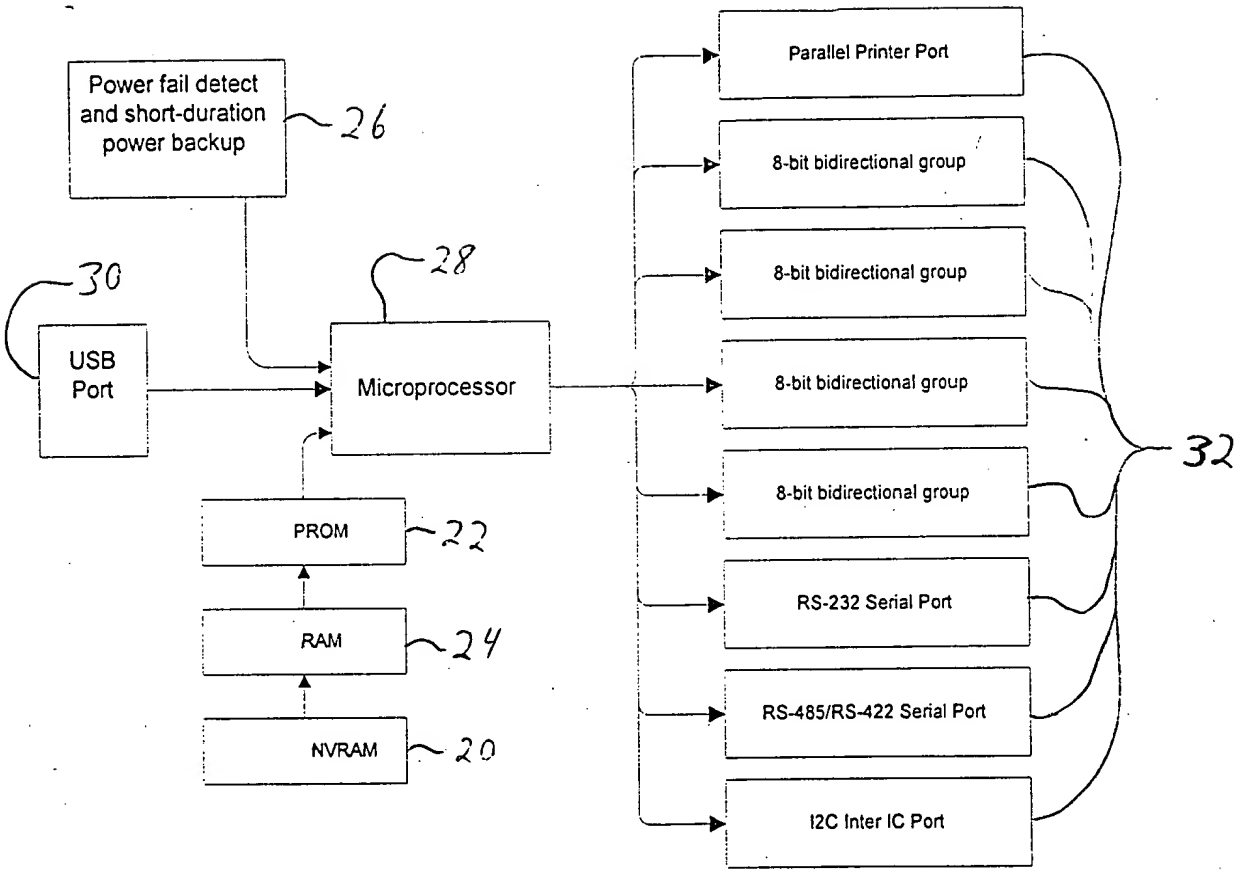

Power fail detect and short-duration power backup
26
30
USB Port
28
Microprocessor
PROM
22
RAM
24
NVRAM
20
Parallel Printer Port
8-bit bidirectional group
8-bit bidirectional group
8-bit bidirectional group
8-bit bidirectional group
RS-232 Serial Port
RS-485/RS-422 Serial Port
I2C Inter IC Port
32

FIGURE 2

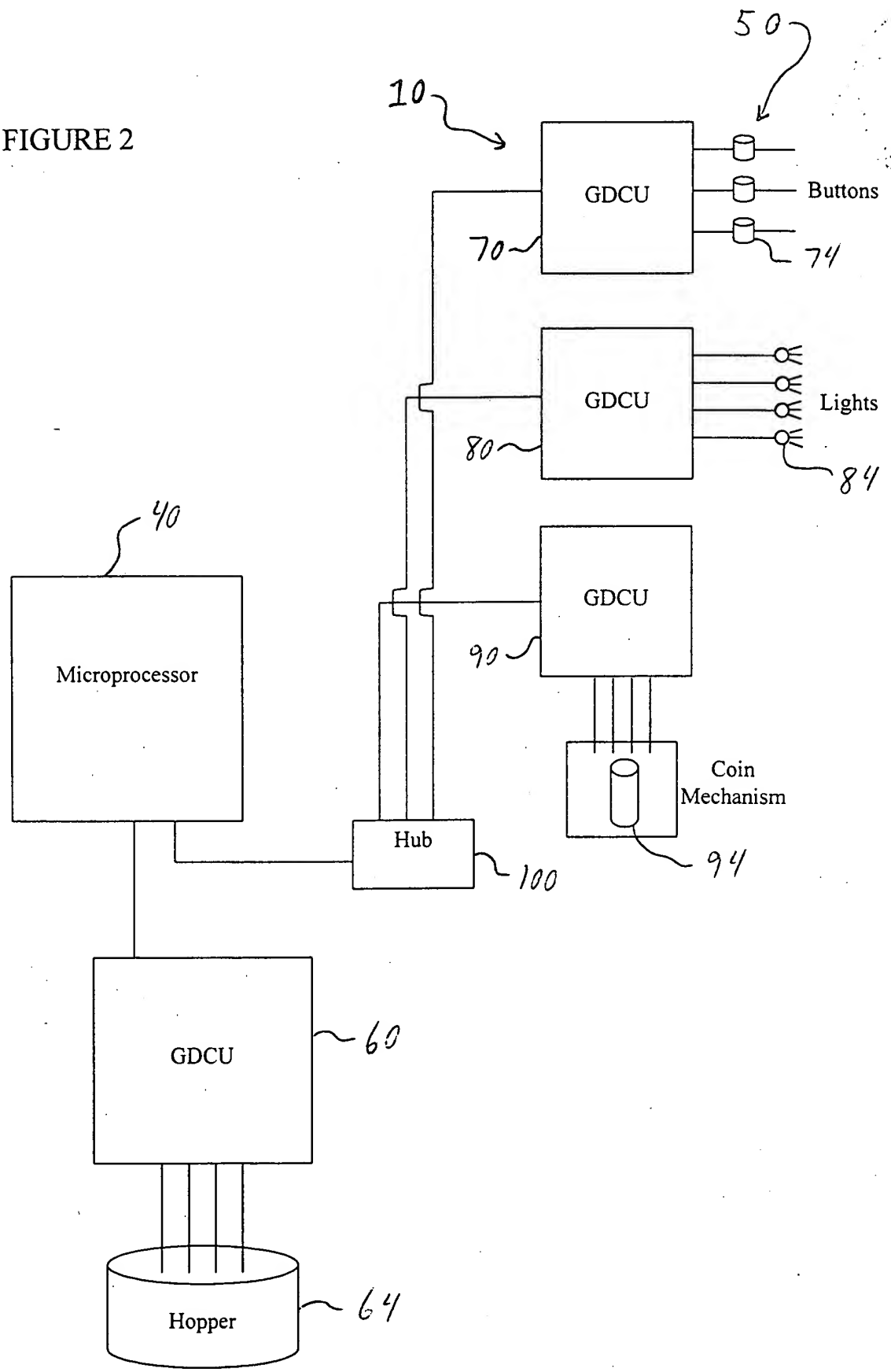

50
10
GDCU
Buttons
70
74
GDCU
Lights
80
84
40
GDCU
Microprocessor
90
Coin
Mechanism
Hub
100
94
GDCU
60
Hopper
64

FIGURE 3

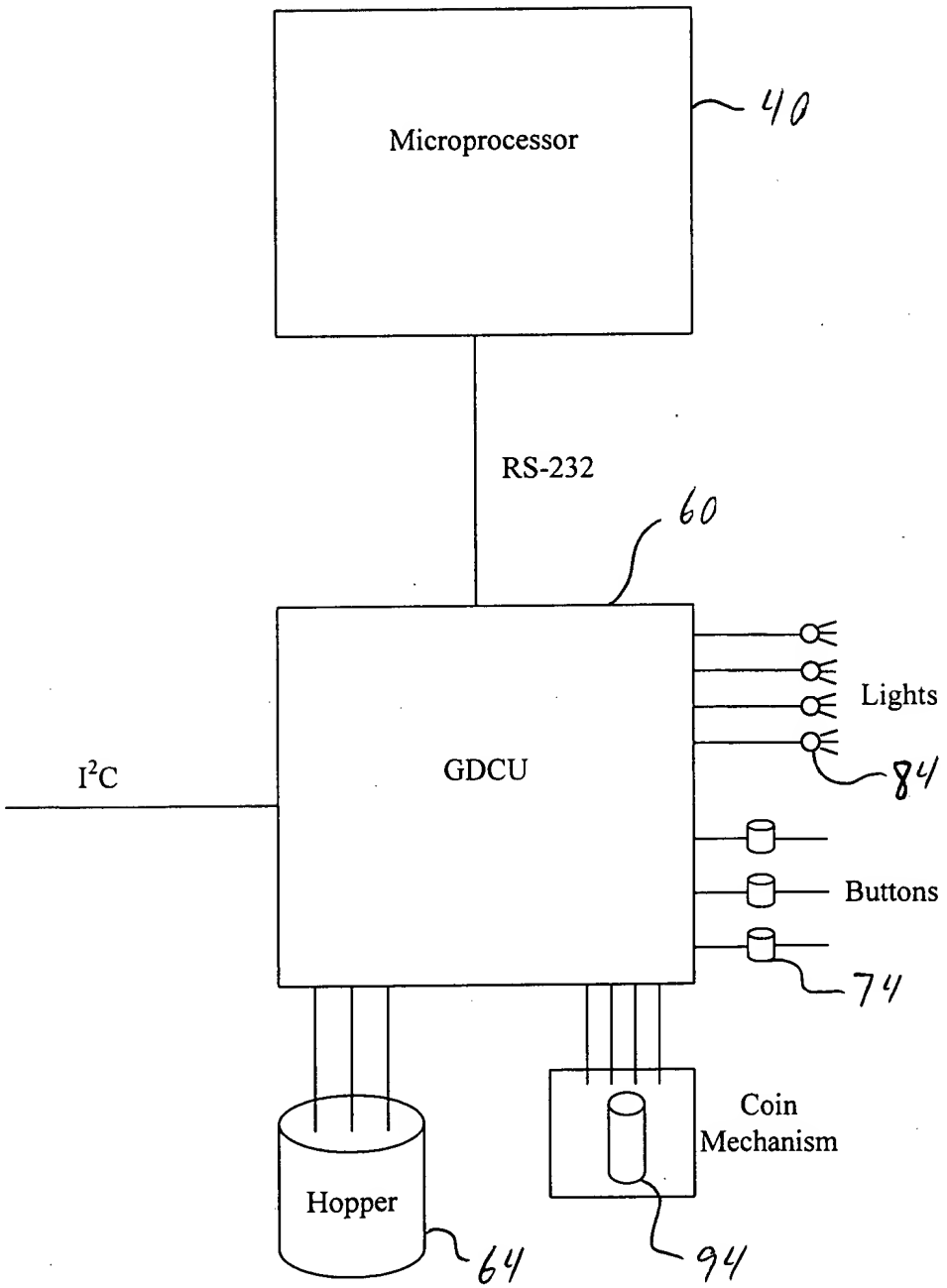

Microprocessor
40
RS-232
60
GDCU
I²C
Lights
84
Buttons
74
Hopper
64
Coin
Mechanism
94

FIGURE 4

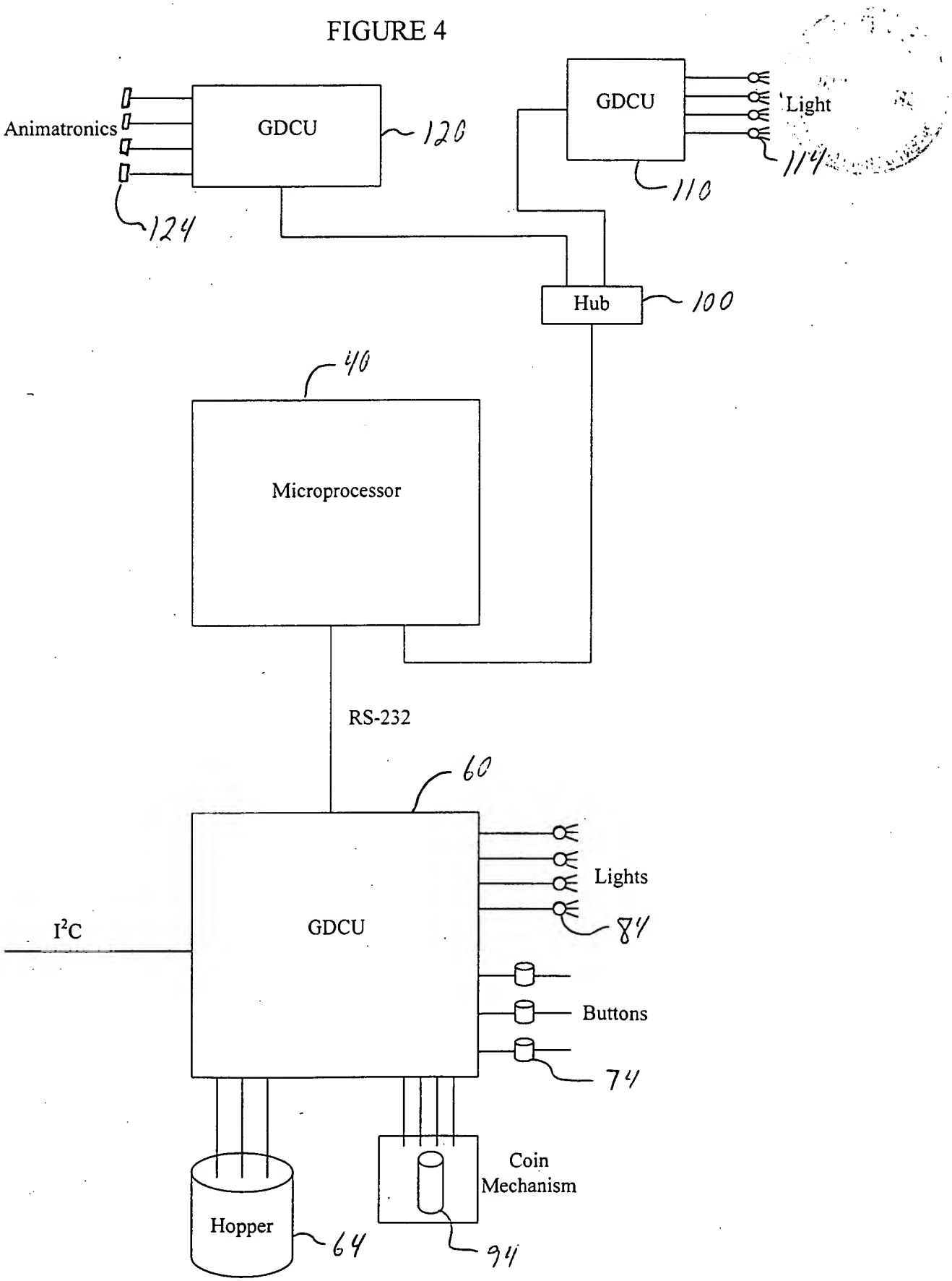

Animatronics
GDCU
120
124
GDCU
Light
110
114
Hub
100
40
Microprocessor
RS-232
60
GDCU
Lights
84
I²C
Buttons
74
Coin
Mechanism
Hopper
64
94

Figure 5A

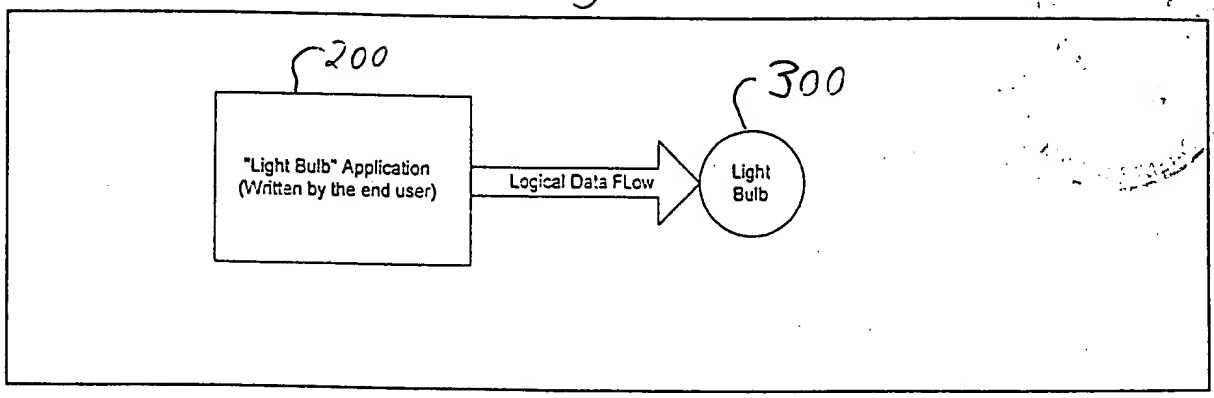


Figure 5B

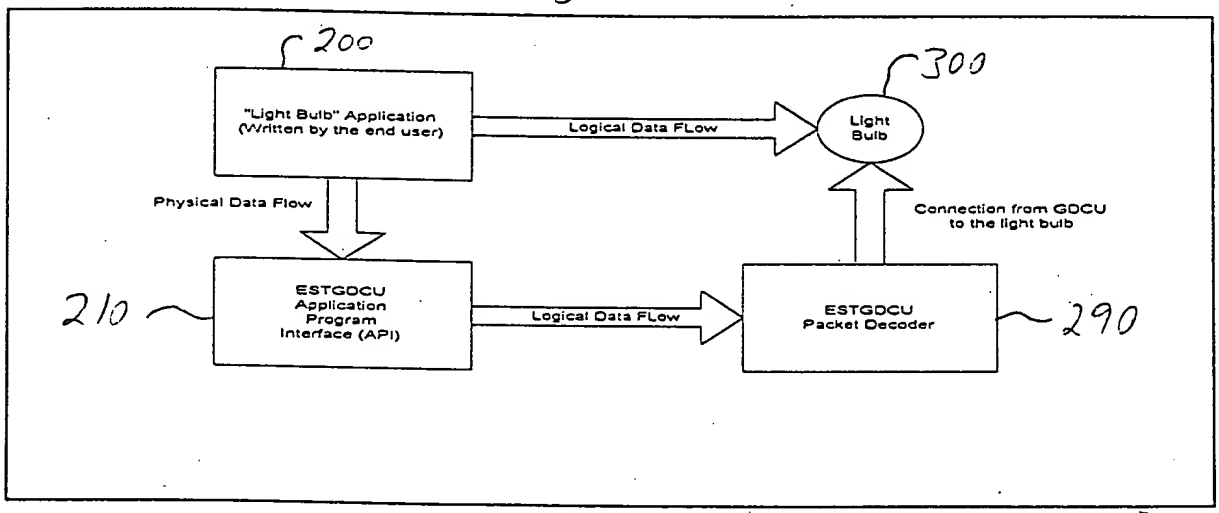
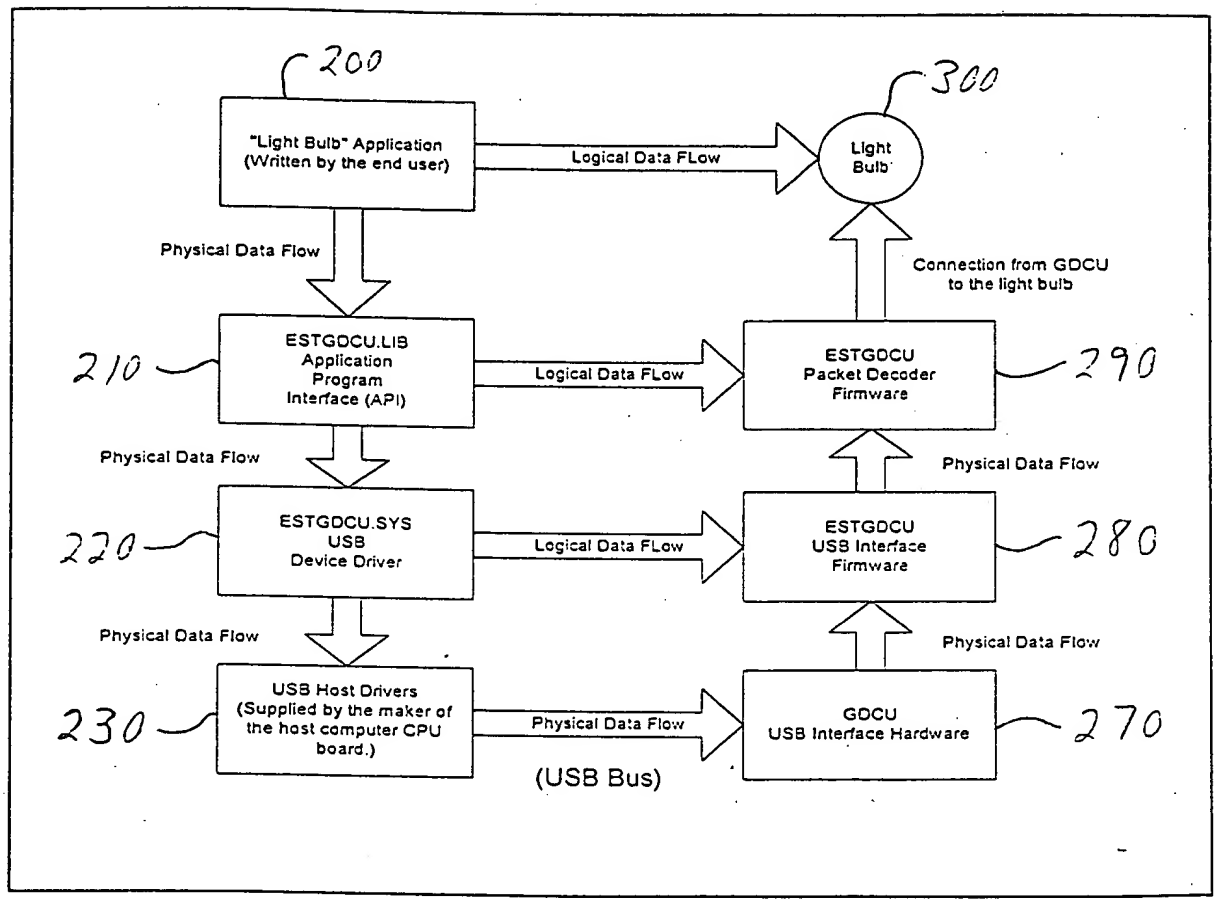


Figure 5C


200
"Light Bulb" Application (Written by the end user)
Logical Data FLow
300
Light Bulb
Physical Data Flow
Connection from GDCU to the light bulb
210
ESTGDCU.LIB Application Program Interface (API)
Logical Data FLow
ESTGDCU Packet Decoder Firmware
290
Physical Data Flow
Physical Data Flow
220
ESTGDCU.SYS USB Device Driver
Logical Data FLow
ESTGDCU USB Interface Firmware
280
Physical Data Flow
Physical Data Flow
230
USB Host Drivers (Supplied by the maker of the host computer CPU board.)
Physical Data Flow
GDCU USB Interface Hardware
270
(USB Bus)